Solution 25.1

a)

		C
Drivers	*123 000[1] / (365 x 5 / 7)[2] x 4[3] x (500[4] – 50[5])*	849 205
Managers	*212 000[1] / (365 x 5 / 7)[2] x 3[3] x (50 – 3[5])*	114 654
Directors	*500 000[1] / (365 x 5 / 7)[2] x 2[3] x (10[4] – 0[5])*	38 356
		1 002 215

[1] *Annual salary*
[2] *Number of working days in a year*
[3] *Expected leave days taken*
[4] *Number of employees at 31 December 20X6*
[5] *Number of employees expected to leave*

b)

	Debit	Credit
31 December 20X6		
Employee benefit expense	1 002 215	
Provision for leave pay		1 002 215
Provision for leave expected to be taken in 20X7		

Solution 25.2

31 December 20X6	**Debit**	**Credit**
Employee benefit expense: current service cost	100 000	
Defined benefit plan: plan obligation		100 000
Current service cost		
Defined benefit plan: plan asset	200 000	
Bank		200 000
Contributions paid during the year		
Defined benefit plan: plan asset	30 000	
Employee benefit expense: expected return on assets		30 000
Return on plan assets (300 000 x 10%)		
Employee benefit expense: interest cost	60 000	
Defined benefit plan: plan obligation		60 000
Finance cost on plan obligation (400 000 x 15%)		
Defined benefit plan: plan obligation	100 000	
Defined benefit plan: plan asset		100 000
Benefits paid during the year		
Defined benefit plan: unrecognised actuarial loss	30 000	
Defined benefit plan: plan asset		30 000
Unrecognised loss in the plan assets (400 – 300 + 100 – 200 – 30)		
Defined benefit plan: unrecognised actuarial loss	40 000	
Defined benefit plan: plan obligation		40 000
Unrecognised loss in the plan obligation (500 – 400 – 100 – 60 + 100)		
Employee benefit expense: actuarial loss	1 000	
Defined benefit plan: unrecognised actuarial loss		1 000
Realising amount above the corridor *10% of the greater of* • *Plan assets C300 000, or* • *Plan obligation C400 000* *The corridor is C40 000 (C400 000 x 10%)* *The difference C15 000 (C55 000 – C40 000), is recognised over the remaining working life of employees of 15 years (C15 000 / 15)*		

Solution 25.3

a)

		C
Actual gross profit	*(1 000 000 x 2)*	2 000 000
Target gross profit		1 000 000
Excess		1 000 000
To be distributed	*(1 000 000 x 20%)*	200 000
Representatives who left in 20X3	*(200 000 x 10%)*	(20 000)
Representatives expected to leave in 20X4	*(200 000 x 10%)*	(20 000)
Provision		160 000

OR: (2 000 000 – 1 000 000) x 0.2 x (40 – 4 – 4) / 40 = 160 000

b)

31 December 20X3	**Debit**	**Credit**
Employee benefit expense: bonus	160 000	
Provision for bonuses		160 000
Recording the provision for bonuses		

Solution 25.4

W1: Leave pay

Cost per day = $\frac{\text{C250 000}}{\text{250 days}}$

= C1 000 per day

Total leave earned and unused in 20X6	320	days
Leave earned in 20X6 that will not be taken in the future *(40 days – 20 days)*	(20)	days
Leave to be taken in the future	300	days
Charged to statement of comprehensive income *(300 days x C1 000)*	C300 000	
Adjustment to 20X5 provision:		
Leave earned in prior years that will not be taken in the future	(20)	days
Reduction in provision (reduces expense) *(20 days x C1 000)*	C(20 000)	
Net adjustment (credit provision; debit expense)	C280 000	

OR: 250 000 / 250 x (320 – 40) = 280 000

W2: Bonuses	**C**
To be distributed *(5 000 000 x 10%)*	500 000
5 new employees *(500 000 x / 80 x 5)*	(31 250)
Charge to the statement of comprehensive income *(500 000 x / 80 x 75)*	468 750

W3: Defined benefit pension plan	**C**
Current service cost	250 000
Return on plan assets	(50 000)
Finance charges on plan obligation	90 000
Actuarial gain now realised	(10 000)
Charged to statement of comprehensive income	280 000

W4: Total charge to statement of comprehensive income	**C**
Leave pay	300 000
Leave pay (reduction in 20X5 provision)	(20 000)
Bonuses	468 750
Defined benefit pension plan	280 000
	1 028 750

Solution 25.5

Scenario 1

Salary	*C100 000 x 120%*	C120 000
Working days per annum	*365 / 7 x 5 days*	260.714 days
Daily salary	*C120 000 / 260.7 days*	C460.274
Number of employees	*Given*	50 000
Days provided for		16
- days brought forward from 20X5		10
- days earned in 20X6		20
- less days used in 20X6		(14)
Total provision requires		*C368 219 200

* This provision includes rounding adjustments.

Scenario 2

Salary	C100 000 x 120%	C120 000
Working days per annum	365 / 7 x 5 days	260.714 days
Daily salary	C120 000 / 260.7 days	C460.274
Number of employees	Given	50 000
Days provided for		3
Unused leave at 31/12/20X5 not taken in 20X6 will expire on 31/12/20X6. Thus we only provide for unused leave from 20X6 (20 – 9), but because the leave is non-vesting we only provide for those 20X6 days that are expected to be used in 20X7 (3)		
Total provision requires		*C69 041 100

* This provision includes rounding adjustments.

Scenario 3

The leave pay is non-accumulating and non-vesting and thus no provision is made. Unused leave is not owed (either as days or as cash) to the employee.

Solution 25.6

a) Pension fund subsidiary ledger accounts

Defined benefit plan: Assets

1/1 O/ balance	*Given*	6 000 000	30/6 Plan obligation	*Given*	1 100 000
30/6 EB expense	*(6m x 12%x6/12)*	360 000	31/12 Unrecognised actuarial gains	*Balancing*	135 600
30/6 Bank	*Given*	1 000 000			
31/12 EB expense	*(o/b 6m+ return 0.36m+contr 1m–benefits 1.1m) x12% x 6/12*	375 600	31/12 C/ balance c/f	*Given*	6 500 000
		7 735 600			7 735 600
31/12 C/ balance b/f		6 500 000			

Defined benefit plan: Obligation

30/6 Plan assets	*Given*	1 100 000	1/1 O/ balance	*Given*	7 000 000
31/12 Unrecognised actuarial gains	*Balancing*	500 000	30/6 EB expense	*(7m x 10% x 6/12)*	350 000
			30/6 EB expense	*(1.5m x 6/12)*	750 000
			31/12 EB expense	*(o/b 7m +int 0.35m +current .75m-oblig 1.1m)x10%x6/12*	350 000
			31/12 EB expense	*(1.5m x 6/12)*	750 000
31/12 C/ balance c/f	*Given*	7 600 000			
		9 200 000			9 200 000
			31/12 C/ balance b/f		7 600 000

Defined benefit plan: Unrecognised actuarial gains

31/12 Plan asset	*Contra entry*	135 600	1/1 O/ balance	*Given*	750 000
31/12 EB expense	*W1*	5 000	31/12 Plan oblig.	*Contra entry*	500 000
31/12 C/ balance c/f	*Balancing*	1 109 400			
		1 250 000			1 250 000
			31/12 C/ balance b/f	*Balancing*	1 109 400

Defined benefit plan: Past service costs

1/1 O/ balance	*Given*	400 000	31/12 EB expense	*(0.4m x 1 / 4 yrs)*	100 000
			31/12 C/ balance	*Balancing*	300 000
		400 000			400 000
31/12 C/ balance	*Balancing*	300 000			

Employee benefit expense

30/6 Plan oblig.	*Contra entry*	350 000	30/6 Plan assets	*Contra entry*	360 000
30/6 Plan oblig.	*Contra entry*	750 000	31/12 Plan assets	*Contra entry*	375 600
31/12 Plan oblig.	*Contra entry*	350 000	31/12 Unrecognised actuarial gains	*Contra entry*	5 000
31/12 Plan oblig.	*Contra entry*	750 000			
31/12 Past service costs	*Contra entry*	100 000	Profit and loss		1 559 400
		2 300 000			2 300 000

Solution 25.6 continued …

b) General ledger accounts

Pension fund liability

30/06	Bank	*Given*	1 000 000	1/1	O/ balance	*W2*	1 350 000
31/12	C/ balance c/f	*W2*	1 909 400	31/12	EB expense	*See part (a)*	1 559 400
			2 909 400				2 909 400
				31/12	C/ balance b/f		1 909 400

Workings:

W1: IAS 19: corridor approach

W1.1: Actuarial gain or loss to be recognised: total		**C**
Net cumulative actuarial gain at the beginning of the year		750 000
The corridor: greater of:		700 000
• 10% of the plan obligation at the beginning of 20X6	*10% x 7 000 000*	700 000
• 10% of the plan assets at the beginning of 20X6	*10% x 6 000 000*	600 000
Excess over the corridor: total gain/ (loss) to be recognised		50 000

W1.2: Actuarial gain or loss to be recognised: in the current year (amortised portion)

$$= \frac{\text{Total gain or loss to be recognised (calculation 1)}}{\text{Average expected remaining working life of the employees}}$$

$$= \frac{50\ 000}{10 \text{ years}}$$

$$= 5\ 000$$

W2: Calculation of opening balance and closing balance of pension fund liability:

Opening balance:	
Plan obligation	(7 000 000)
Plan assets	6 000 000
Unrecognised actuarial gains	(750 000)
Past service costs	400 000
	(1 350 000)

Closing balance:	
Plan obligation	(7 600 000)
Plan assets	6 500 000
Unrecognised actuarial gains	(1 109 400)
Past service costs	300 000
	(1 909 400)

Solution 25.6 continued …

c) Disclosure

RYAN LIMITED
NOTES TO THE FINANCIAL STATEMENTS (EXTRACTS)
FOR THE YEAR ENDED 31 DECEMBER 20X6

2. Accounting policies

Defined benefit plan

Actuarial gains and losses arising from the company's defined benefit plan are recognised in income to the extent that they exceed IAS 19 corridor limits, over the average remaining working life of the employees. The corridor limits apply to the cumulative unrecognised actuarial gains and losses at the end of the previous reporting period to the extent that they exceed the greater of:

- 10% of the present value of the gross defined obligation at that date, and
- 10% of the fair value of any plan asset at that date

4. Pension fund liability		**20X6**
		C
Present value of liability		7 600 000
Fair value of plan assets		(6 500 000)
Net plan obligation		1 100 000
Unrecognised actuarial gains		1 109 400
Past service costs		(300 000)
Pension liability		1 909 400
Reconciliation: plan obligation		
Opening balance of obligation		7 000 000
Interest cost		700 000
Current service cost		1 500 000
Past service cost		0
Actuarial losses / (gains)		(500 000)
Benefits paid		(1 100 000)
Closing balance of net plan liability		7 600 000
Reconciliation: plan assets		
Opening balance of assets		6 000 000
Expected return on assets		735 600
Contributions to fund		1 000 000
Actuarial (losses) / gains		(135 600)
Benefits paid		(1 100 000)
Closing balance of net plan liability		6 500 000
Expected return on plan asset:	*360 000 + 375 600*	735 600
Actuarial loss on plan asset		(135 600)
Actual return on plan asset		600 000

The principal actuarial assumptions applied in the determination of the fair values, expressed as weighted averages, include

Discount rate	10%
Expected return on plan assets	12%
Expected future salary increases	xx%
Expected proportion to take early retirement	xx%
Proportion of employee covered by groups retirement benefit plans	xx%

Solution 25.6 continued …

c) Disclosure continued …

RYAN LIMITED
NOTES TO THE FINANCIAL STATEMENTS (EXTRACTS)continued …
FOR THE YEAR ENDED 31 DECEMBER 20X6

8. Employee benefit expense		**20X6**
		C
Current service costs	*Given*	1 500 000
Interest expense	*(7m x 12% x 6 / 12) + (7m+0.35m+.75m-1.1m)x10%x6/12*	700 000
Expected return on plan assets	*(6m x 12% x 6 / 12) + (6m+0.36m+1m– 1.1m)x12%x6/12*	(735 600)
Recognised actuarial gain	*W1*	(5 000)
Past service cost recognised	*400 000 / 4 years x 1 year*	100 000
Pension funds expense		1 559 400

Solution 25.7

a)

Employee benefit expense		**20X6**
		C
Current service costs	*Given*	295 000
Interest expense	*700 000 x 11.5%*	80 500
Expected return on plan assets	*1 000 000 x 12%*	(120 000)
Recognised actuarial (gain)/loss	*W3*	39 500
Past service cost (benefits reduced)	*(150 000 / 3)*	(50 000)
Pension funds expense		245 000

W1: Plan obligation		**C**
Opening balance	*Given*	700 000
Current service cost	*Given*	295 000
Interest on obligation	*700 000 x 11.5%*	80 500
Past service cost		0
Benefits paid	*Given*	(450 000)
Present value of obligation at ye expected to be		625 500
Actuarial loss on obligation	*Balancing*	169 500
Present value of obligation at year-end is	*Given*	795 000

W2: Plan assets		**C**
Opening balance at fair value	*Given*	1 000 000
Expected return on plan assets	*1 000 000 x 12%*	120 000
Contributions to fund	*Given*	300 000
Benefits paid	*Given*	(450 000)
Fair value of plan assets at yr-end expected to be		970 000
Actuarial Gain	*Balancing*	130 000
Fair value of plan assets at year end is	*Given*	1 100 000

W3: Net actuarial (gain)/loss		**C**
Actuarial gain on assets	*W2*	(130 000)
Actuarial loss on obligation	*W1*	169 500
Net Actuarial loss	*Balancing*	39 500

Solution 25.7 continued …

b)

Employee benefit expense: total at 31 December 20X8		**C**
Current service cost		295 000
Interest on obligation		80 500
Past service cost		(50 000)
Expected return on plan assets		(120 000)
Net actuarial (gains)/losses recognized in current year	*Part (b): W2*	10 000
Employee benefit expense		215 500

Unrecognised actuarial (gain)/loss: balance at 31 December 20X8		**C**
Unrecognized actuarial (gain)/loss: beginning of year	*Given*	200 000
Actuarial gain on assets	*Part (a): W1*	(130 000)
Actuarial loss on obligation	*Part (a): W2*	169 500
Recognised due to corridor	*Part (b): W2*	(10 000)
Unrecognized actuarial loss: end of year		229 500

W1: Actuarial gain or loss to be recognised: total		**C**
Net cumulative actuarial loss / (gain) at the beginning of the year		200 000
Less the corridor: greater of:		100 000
• 10% of the plan obligation at the beginning of 20X6	*10% x 700 000*	70 000
• 10% of the plan assets at the beginning of 20X6	*10% x 1 000 000*	100 000
Excess over the corridor: total loss / (gain) to be recognised		100 000

W2: Actuarial gain or loss to be recognised: in the current year (amortised portion)

$$= \frac{\text{Total gain or loss to be recognised (W1)}}{\text{Average expected remaining working life of the employees (given)}}$$

$$= \frac{100\ 000}{10 \text{ years}}$$

$$= 10\ 000$$

Solution 25.8

a)

There are 4 types of employee benefits specified under IAS 19:

- Short term benefits,
- Long term benefits,
- Post employment benefits and
- Termination benefits.

With regard to this question:

- the employee is still employed and thus there are no termination benefits,
- the benefits provided are for current service and thus there are no post employment benefits,
- the benefits are all for a period of less than 12 months and thus there are no long term benefits

This leads to the conclusion that the benefits are all short term benefits.

Sub categories of short term benefits evident above include: wages/salaries/medical aid contribution etc, short term paid leave, profit sharing/bonuses.

b) Comment:

- IAS 19.9 states that short term employee benefits are recognized on an undiscounted basis. The discount rate that is provided is therefore irrelevant
- Personal tax is NOT a cost to the business but rather a cost to the employee in their own capacity. This information is also therefore irrelevant

29 February 20X8		**Debit**	**Credit**
Employee benefit expense: salary		150 000	
UIF liability			3 000
Pension fund liability			15 000
Current tax payable: employee's tax			33 000
Workers Union liability			1 000
Medical Aid liability			7 000
Salary payable			91 000
Recognition of employee salary			
Employee benefit expense: salary		14 500	
Medical Aid liability	*7 000 x 1 / 1*		7 000
Pension fund liability	*Given*		7 500
Employers contribution for employee's benefit			
UIF liability		3 000	
Pension fund liability	*(15 000 + 7 500)*	22 500	
Current tax payable: employees tax		33 000	
Workers Union liability		1 000	
Medical Aid liability	*(7 000 + 7 000)*	14 000	
Salary payable		91 000	
Bank			164 500
Liability accounts cleared (paid)			
Employee benefit expense: bonus		30 000	
Bonus payable	*10% x (1 200 000 – 900 000)*		30 000
Provision for bonus			
Employee benefit expense: leave pay		4 417	
Provision for leave pay	*164 500 ÷ 365 x 7/5 x 7 days leave*		4 417
Recognition of paid leave: accumulating and non-vesting			

Solution 25.8 continued …

c)

30 April 20X8		**Debit**	**Credit**
Employee Benefits Expense: Salary	*(150 000 ÷ 12)*	12 500	
UIF liability	*(3 000 ÷ 12)*		250
Pension fund liability	*(15 000 ÷ 12)*		1 250
SARS: Employee's Tax	*(33 000 ÷ 12)*		2 750
Workers Union liability	*(1 000 ÷ 12)*		83
Medical Aid liability	*(7 000 ÷12)*		583
Salary Payable	*(91 000 ÷ 12)*		7 583
Recognition of employee salary			
Provision for leave pay		4 417	
Employee Benefit Expense: Leave Pay			4 417
Utilisation of leave owed			

Solution 25.9

Leave Pay:

- Directors
  350 000 / 365 x 7/5 x 8 employees x 15 days (W1) x 40% = 64438

- Laboratory Workers
  180 000 / 365 x 7/5 x (55-5) employees x (18-11) days x 90% = 217479

- Office Workers
  110 000 / 365 x 7/5 x 25 employees x (16-10) days x 90% = 56959

- Total Provision
  64438 + 217479 + 56959 = 338876

Maternity:

- No journal entry. This is due to the maternity leave being non-accumulating and non-vesting. When one of the female employees takes the maternity leave due to them, the leave will be recorded as part of the salary expense.

W1:
- 20 – 4 = 16 but limited per company policy to 15 (see table).